```
> # CESARO SUMMATION OF A TRIANGLE WAVE
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> aodd := k -> 1/(2*k + 1)^2;
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$$aodd := k \to \frac{1}{(2k+1)^2} \tag{1}$$

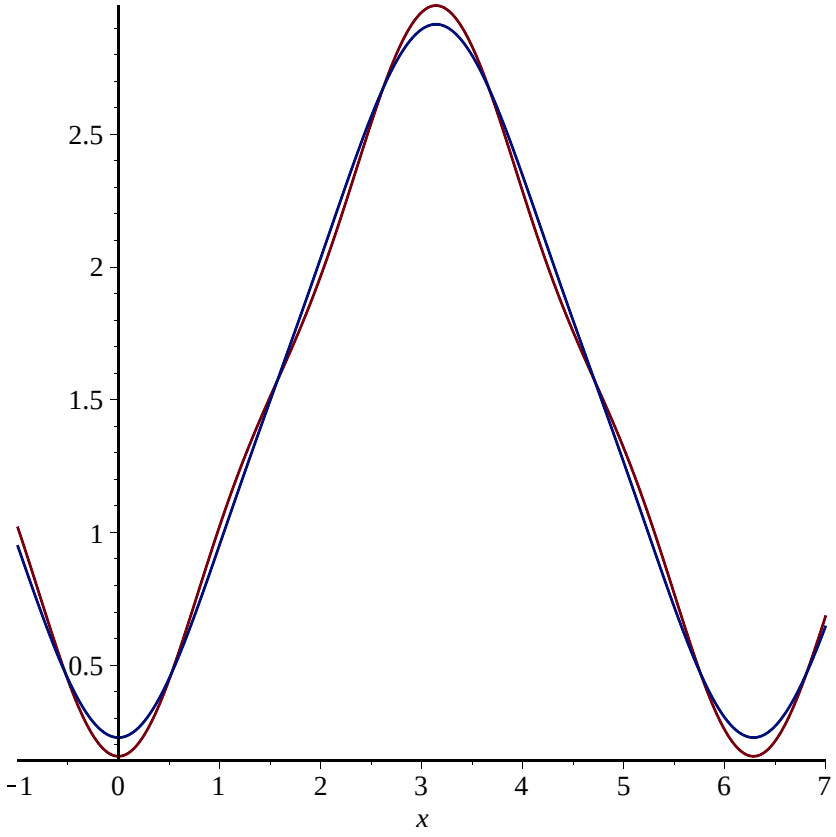
```
> partialsum := K -> (Pi/2) - (4/Pi)*sum(aodd(k)*cos((2*k+1)*x), k=
  0..K);
```

$$partialsum := K \to \frac{1}{2}\pi - \frac{4\left(\sum_{k=0}^{K} aodd(k)\cos((2k+1)x)\right)}{\pi} \tag{2}$$

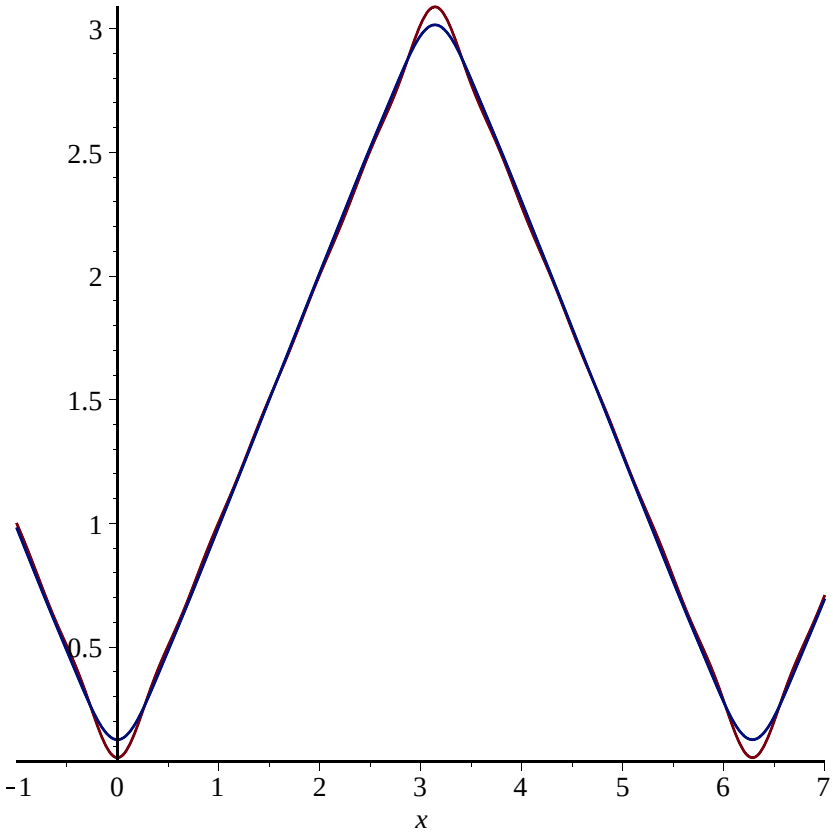
```
> mean := M -> (1/(M+1))*sum(partialsum(K), K=0..M);
```

$$mean := M \to \frac{\sum_{K=0}^{M} partialsum(K)}{M+1} \tag{3}$$

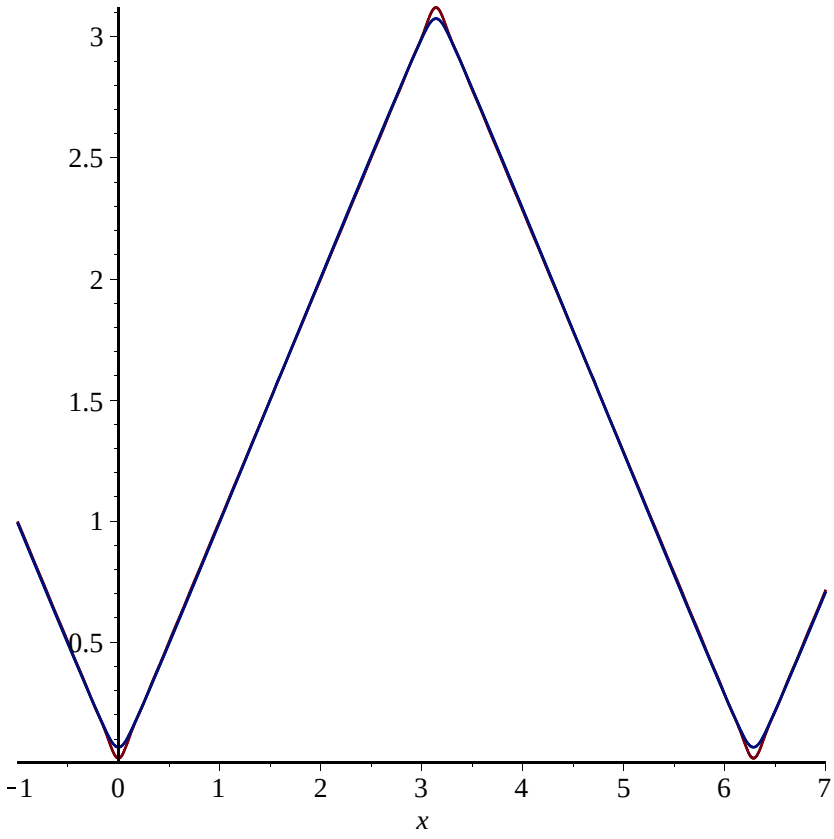
```
> plot([partialsum(1), mean(1)], x=-1..7);
```



```
> plot([partialsum(5), mean(5)], x=-1..7);
```

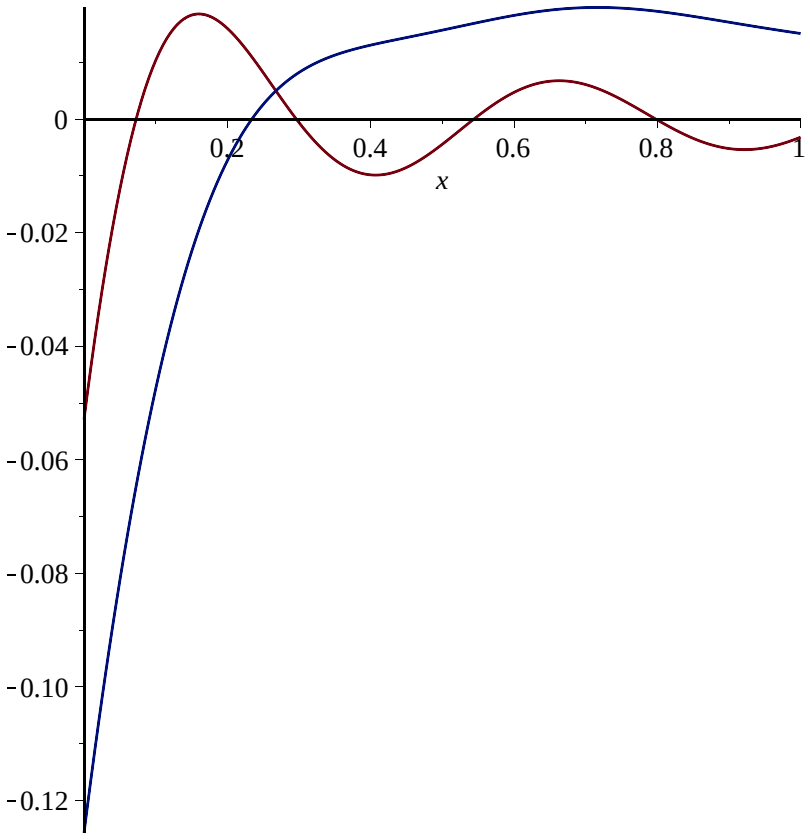



```
> plot([partialsum(15), mean(15)], x=-1..7);
```

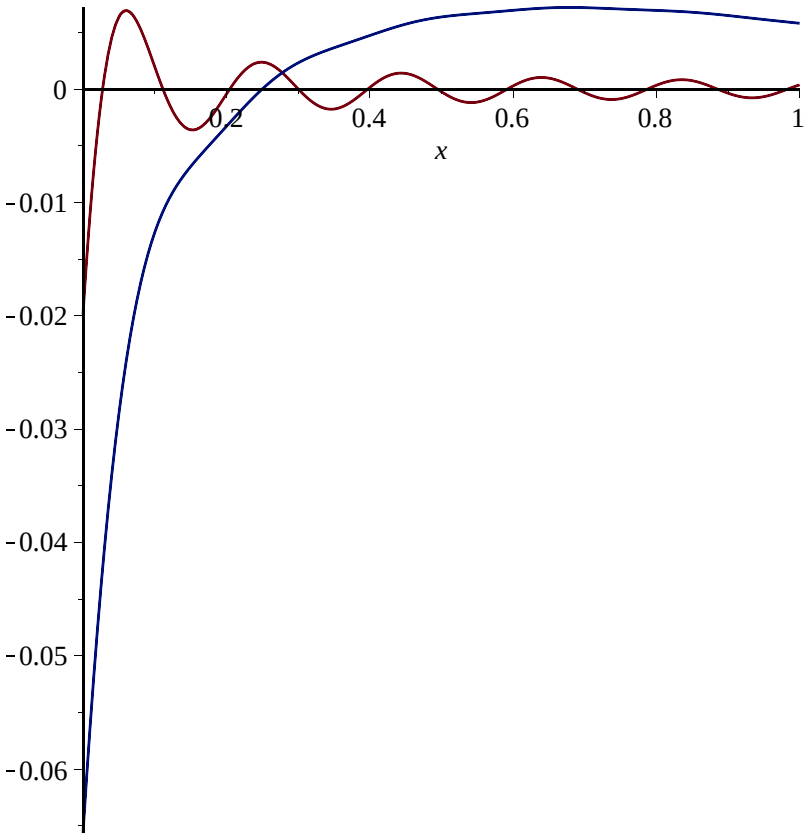



```
> # Close inspection shows that the Cesaro mean curve is BLUNTER
  than the partial sum curve.
> # This is shown clearly by examining the error in the
  approximations:  (Note the change in vertical scale.)

> plot([abs(x) - partialsum(5), abs(x) - mean(5)], x=0..1);
```




```
> plot([abs(x) - partialsum(15), abs(x) - mean(15)], x=0..1);
```


0
0.2
0.4
0.6
0.8
1
x
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06